



**ABOVE** • NIAID director Dr. Anthony Fauci is recognized anew by President Bush, receives nation's highest civil honor. See p. 3.

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# nih record

## Helicopter Traffic Around NIH Campus: Going Up

By Belle Waring

**C**hoppers! Their sound is unmistakable, their profile unforgettable. When you hear that whap-whap-whap as they skirt the Bethesda campus, you might wonder if air traffic is increasing. It is.

The campus is in the approach and departure pattern of two active heliports: to the east, the National Naval Medical Center (NNMC); and to the west, Suburban Hospital.

“The increase in helicopter traffic,” says Office of Community Liaison Director Dennis Coleman, “coincides with two trends.”

First, air transport has become a trauma-care standard; as part of Maryland’s Trauma Center Network, Suburban Hospital is regularly visited by helicopters operated by the Maryland State Police, as well as 3 state-licensed private air ambulance services.



*A frequent flyer around the Bethesda campus is the EC AS-65, a medical evacuation helicopter.*

[SEE HELICOPTERS, PAGE 6](#)



*NIH recently met with a teachers’ group to translate what we know about how children learn into the classroom.*

*Teaching the Teachers*

### NICHHD Helps Move Child Development Research into Classrooms

By Carla Garnett

Bench to bedside has always been NIH’s creed for medical research. Led by NICHHD and an expert panel it convened, the agency is expanding its mantra into education research. Call it, perhaps, “clinic to classroom.”

NICHHD—with cosponsor, the National Council for the Accreditation of Teacher Education (NCATE)—is investing resources in reaching the teachers before they reach the children.

[SEE CLASSROOM, PAGE 4](#)

### Symposium Explores Promise of Stem Cell Therapies

By Daniel Stimson

Stem cells have been hailed as a toolkit to treat a host of diseases, but at an NIH symposium on May 6, researchers said they are still deciphering the toolkit’s instruction manual.

Hosted by the NIH stem cell task force, Challenges and Promise of Cell-Based Therapies brought together about 400 scientists to discuss the clinical applications of embryonic and adult stem cells. Embryonic stem (ES) cells are pluripotent, meaning they give rise to all the cell types of the body. Stem cells are also found in adult tissues, but whether they are truly pluripotent is unknown.

“Stem cells come in different flavors, and it is clear that there is no single best stem cell for all applications,” said NINDS director and task force chair Dr. Story Landis. Stem cell therapies for some diseases have been rigorously tested, but for most diseases, stem cells “are still on the drawing board,” she said.

Dr. Stuart Orkin of the Dana-Farber Cancer

[SEE STEM CELLS, PAGE 8](#)



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## briefs

### NIH Director's Awards Ceremony, July 21

All employees are invited to the 2008 NIH Director's Awards ceremony on Monday, July 21 at 1 p.m. in the Natcher Bldg. main auditorium. Awards will be presented in five categories: Director's Award, Mentoring Award, Director's Award for the NIH Roadmap for Medical Research, Commissioned Corps awards and EEO awards. Seating is on a first-come, first-served basis. Sign language interpreters will be provided. A reception will be held after the ceremony in the Natcher cafeteria. Individuals with disabilities who need reasonable accommodation to participate in the event should contact (301) 435-1619 or [wlc@od.nih.gov](mailto:wlc@od.nih.gov).

### NIH eRA Project Holds Open House

On Wednesday, July 23 from 9:30 a.m. to 12:30 p.m., the NIH eRA Project's User Support Branch will hold an open house to show NIH users its appreciation of their continued support. The branch serves thousands of IMPAC ii and Commons customers per year. The open house will be held at Rockledge I, first floor, suite 1091. The open house will be interactive; users will get to see the eRA Help Desk, training and documentation teams in action. Light refreshments will be offered. There will also be tours, games and a question-and-answer session. No advance registration is necessary, but have your NIH ID with you. For more information, contact Patty Austin at (301) 594-4784 or [patty\\_austin@nih.gov](mailto:patty_austin@nih.gov). Inform her of any need for sign language interpretation or other reasonable accommodation by July 15.

### 2008 Science in the Cinema

In partnership with the American Film Institute Silver Theatre and Cultural Center, the NIH Office of Science Education has begun its 2008 free film and discussion series Science in the Cinema (<http://science.education.nih.gov/cinema>).

The series is open to the public and intended for people who enjoy movies and have an interest in science and medicine. This year's topics include Alzheimer's disease, locked-in syndrome, schizophrenia, syphilis, HIV/AIDS and post-traumatic stress disorder.

Every Wednesday through Aug. 13, a film with a medical science-related theme will be shown at 7 p.m. Following each film, an expert will comment on the science depicted in the film and take questions from the audience. Tickets are free and available on a first-come, first-served

basis through the AFI Silver box office, day of show only. Seating is limited to the first 400 people.

All films will be shown with captions. Sign language interpreters and real-time captioning will be provided for the post-film discussions. If you require other reasonable accommodation to participate, contact OSE at least 5 days before the event at [moorec@mail.nih.gov](mailto:moorec@mail.nih.gov), (voice) (301) 402-2470, or (TTY) through the Federal Relay Service at 1-800-877-8339.

### Workshop on Vasculopathy in Sickle Cell Disease

The Workshop on Vasculopathy in Sickle Cell Disease will take place during the 2008 Annual Sickle Cell Disease Clinical Research Meetings during the week of Aug. 25-29. The 2-day workshop will address: scientific evidence for hemolysis-associated impairment of nitric oxide bioavailability; epidemiologic linkage to pulmonary hypertension, priapism and leg ulceration; linkage of oxidative, nitric oxide deficient state to hemostatic activation and vascular adhesion; similarities and differences of sickle vasculopathy compared to atherosclerosis; and new opportunities for translational therapies. Abstract submissions will close on July 25. Visit [www.sicklecellmeeting.net](http://www.sicklecellmeeting.net) for more details in addition to online registration and abstract submission. For more information contact Sue Dilli at [sue@strategicresults.com](mailto:sue@strategicresults.com) or (443) 451-7252.

### NIH Sailing Association Open House, July 26

The NIH Sailing Association will hold an open house on Saturday, July 26 from 10 a.m. to 3 p.m. at the Selby Bay Sailing Center in Mayo, Md. Explore your interest in learning to sail and discover opportunities for sailing with NIHSA. There will be demonstration sails for adults in the club's 19-ft. Flying Scot sailboats. Fall sailing classes begin Aug. 20; this is a good chance to preview the boats and meet the members. At the open house you can: join NIHSA; sign up for the 6-week Adult Sailing Class; find out about club sailboat racing; and check out the social schedule of NIHSA. Directions can be found at [www.recgov.org/sail](http://www.recgov.org/sail). Food and drinks are \$5 per person. Look for posters and flyers around campus for more information.

## NINDS Participates in Stroke Awareness Month Activities

With the number of annual strokes now reaching 780,000, there is an even greater need for public education about the symptoms and the urgency of seeking treatment for stroke. In recognition of May as National Stroke Awareness month, NINDS conducted several outreach activities:

**Radio.** NINDS deputy director Dr. Walter Koroshetz and Dr. John Lynch, a program director in the NINDS Office of Minority Health and Research, conducted a radio media tour and gave interviews to radio networks and stations across the country, from Sarasota, Fla., to Dayton, Ohio, and the national affiliate American Urban Radio Network. The total estimated audi-



*NINDS deputy director Dr. Walter Koroshetz (r) is interviewed by NIH Radio's Woleola Akinso for a feature on stroke. The program aired on 1,000 stations through XM Radio.*

ence was 1.5 million listeners. Koroshetz also was interviewed by NIH Radio for a feature on stroke that aired on 1,000 stations through XM Radio and is available on the NIH web site.

**NIH Podcast.** Lynch was interviewed by Dr. Vivian Pinn, director of the NIH Office of Research on Women's Health, for the podcast "Pinn Point on Women's Health: Women and Strokes." The program is available on the NIH web site and has an average of 300 downloads a week.

**English and Spanish print releases.** NINDS releases, which were each geared to general, African-American and Hispanic audiences, were distributed to networks of more than 10,000 national and community newspapers, 500 African-American-focused newspapers and more than 700 Hispanic-focused newspapers.

**Spanish-language radio release.** NINDS scripted, produced and distributed a Spanish-language radio release to 500 Hispanic stations, including community and public outlets across the U.S. In addition to raising awareness about

stroke symptoms, the 60-second release highlights the need for non-English speakers to say "stroke" when calling 911.

NINDS has been building on its national public education campaign, Know Stroke: Know the Signs. Act in Time with the critical messages that stroke is an emergency and that bystanders and stroke patients alike must be able to recognize the symptoms and act quickly. The campaign offers a wide array of public and professional educational materials on stroke symptoms, prevention, treatment, research and rehabilitation, which can all be found on the new web site [www.stroke.ninds.nih.gov/](http://www.stroke.ninds.nih.gov/). The institute has also launched a grass-roots stroke education program, Know Stroke in the Community, and has identified local "Stroke Champions" in 11 cities to date.

NINDS also reached out to its partner organizations to take part in Stroke Month activities. The General Federation of Women's Clubs, the world's oldest and largest women's community service organization, placed a Know Stroke feature on its web site. The National Council of La Raza promoted the NINDS Spanish-language toolkit for *promotores* (lay health educators) in its affiliate member services e-newsletter in May. The messages reached health educators in more than 300 Hispanic community-based clinics and organizations, with information on how to order and use the toolkits.

President George H.W. Bush declared May National Stroke Awareness Month in 1989 to enhance public awareness of stroke. 

## Fauci Wins Presidential Medal of Freedom

*NIAID director Dr. Anthony Fauci (l) was presented with the 2008 Presidential Medal of Freedom by President George W. Bush on June 19 in the East Room of the White House. The award citation lauded Fauci's efforts in the fight against HIV/AIDS and*



*"his commitment to enabling men, women, and children to live longer, healthier lives." The Presidential Medal of Freedom is the nation's highest civil award. Established by Executive Order 11085 in 1963, the medal may be awarded by the President "to any person who has made an especially meritorious contribution to the security or national interests of the United States, or world peace, or cultural or other significant public or private endeavors."*

WHITE HOUSE PHOTO: DAVID BOHRER



## CLASSROOM

CONTINUED FROM PAGE 1

### Above:

NICHD deputy director Dr. Yvonne Maddox (seated, second from l); John Burklow (seated, third from l), NIH associate director for communications and public liaison; and Dr. Bruce Fuchs (seated third from r), director of NIH's Office of Science Education, meet with a panel of the National Council for the Accreditation of Teacher Education (NCATE).

### Below:

Fuchs joins then-NCATE president Dr. Arthur Wise (c) and Dr. Jennifer LoCasale-Crouch of the University of Virginia for an expert panel discussion on translating child development research into classroom practices.

PHOTOS: ERNIE BRANSON



In recent years, the two organizations have teamed up to map out ways to translate what is known about child and adolescent development into practical measures instructors can use in their classrooms. NCATE represents 33 professional groups devoted to advancing teacher education at every level. The NICHD-NCATE expert panel met May 20-21 at NIH in its third roundtable discussion since 2005 to mark progress and set next steps.

### Teachable Moments

"We're happy to be working with you on this third phase of our project to look at how we can more fully apply the scientific research we have supported over the years to how a child learns," said NICHD deputy director Dr. Yvonne Maddox, who welcomed the panel. "We want to bring together all the research data we have accumulated. Many of you have worked with us on these studies, and we want to work with you now to translate it and put it into a form that can not only improve teaching but also enhance the entire education system."

She said NICHD has recognized that its role must expand. It's "more than just conducting and supporting research on how children learn," she continued. "It's also about getting that knowledge to teachers so they can exercise the best skills possible in their classrooms, and it's about changing policies so that we can improve system-wide."

Offering greetings on behalf of NIH director Dr. Elias Zerhouni, John Burklow, NIH associate director for communications and public liaison, said the agency is committed to encouraging healthy behavior as early as possible by edu-

cating children about diet, exercise and other lifestyle choices through the "WE CAN" [Ways to Enhance Children's Activity & Nutrition] national program. In addition, NIH wants more young people to pursue science as a career, he said, so that the medical research community remains vibrant and continues to gain public trust around the world.

### Translation, Please

Dr. Bruce Fuchs, director of NIH's Office of Science Education, also addressed the panel. Referring to a January 2008 letter Zerhouni sent to grantees, Fuchs reiterated NIH's concern about growing the "talent base we're going to need to continue to have the researchers in the future to make a place like the NIH go."

In the desk-to-desk note, the director wrote, "Our best hope for making a broad impact on the children of this nation would be to have a grassroots movement of scientists across the country, rallying for improved science education in their own communities." Zerhouni also suggested "ways that you might use the tools developed at NIH to partner with local teachers and officials and help revitalize American science education. I hope that many of you rise to this challenge. If those of us already passionate about science don't carry the torch, who will?"

Fuchs said he's been inspired to "think much more broadly than simply science education... think more broadly about skills—particularly the skills that kids are going to need in our economy today if they hope to be employed at something approaching a middle-class level."

He noted that it's relatively easy to draw a diagram for how basic medical research gets from labs to clinics to doctors in small practices around the country. [However] it's virtually impossible to trace results of learning research in a similar "connect-the-dots" way.

"How does knowledge from research and practice get translated through teacher education?" he asked. "That's the guiding question you all will help answer. And that's a huge challenge."

### Tailoring the Yardsticks

After setting goals for the meeting and reviewing NICHD-NCATE-commissioned reports, panelists discussed a variety of issues including nationwide standards for making child development knowledge an innate component of teacher preparation models. Although hundreds of colleges use NCATE measurements as a base, interpretations of the standards are uneven across the country, the panel found. Are the criteria rigorous enough to be effective, or are they

merely an “exercise in compliance?” one panelist asked. Other experts thought aloud that the yardsticks themselves were effective, but that widely divergent applications of the standards might pose the problem. Another suggested that the panel recommend ethical or moral factors be added to development standards. The group even dabbled in semantics, as members briefly considered the difference between “learning” and “development.”

As often happens when a bunch of smart people are captive together and focused on a shared goal, time sped by. Late in the afternoon on the final day, the presentations and brainstorming drew to a close with plans to review exemplary curriculum strategies and practices at the next meeting slated for some time in November.

“The state of child and adolescent development research is more robust than its practice,” acknowledged Dr. Arthur Wise, NCATE president. “More knowledge [exists] that would be useful if it were made accessible to [teachers]...There is much more we can do to effectively prepare our teachers. It’s going to take some changes.”

### NCI’s Trinchieri Wins Milstein Award

*Dr. Giorgio Trinchieri, director of the Cancer and Inflammation Program and chief of the Laboratory of Experimental Immunology, Center for Cancer Research, NCI, has been named the 2008 recipient of the Seymour and Vivian Milstein Award from the International Society of Interferon and Cytokine Research. The award is given annually to individuals who have made internationally recognized contributions to basic or clinical research related to interferons and cytokines. Trinchieri was honored for his “seminal contributions in the identification of type I interferon-producing cells and their role in viral clearance and immune responses” and for his discovery and characterization of IL-12 and its functions. The Milstein Award will be presented at the annual meeting of the ISICR in Montreal, Oct. 12-16.*



### Three Students Win Addiction Science Award

For the first time ever, three students received awards for exemplary projects in addiction science at the world’s largest science competition for high school students—the Intel International Science and Engineering Fair. The new addiction science award is co-sponsored by NIDA and its education partner Scholastic, the global children’s publishing, education and media company. This is the first series of Intel awards given exclusively for projects that advance addiction science.

A 16-year-old senior, Kapil Vishveshwar Ramachandran, from Westwood High School in Austin, Tex., received top honors and an award of \$2,500 for his project, *The Novel Role of the GluCl-alpha; Ion Channel and Diazepam Binding Genes in Alcohol Addiction*, an ambitious exploration of the basic mechanisms underlying addiction. The young scientist determined that when a specific protein (diazepam binding inhibitor) is deleted in fruit flies, the flies may lose their tolerance to alcohol.

Although the protein had been previously identified, these findings are a strong indication that it may play a role in addiction.

“The judges were particularly impressed with the winner’s enthusiasm and innovative approach to exploring the neurological underpinnings of addiction,” said NIDA director Dr. Nora Volkow. “He developed a simple, sensitive, elegant instrument to measure tolerance in fruit flies, and ended up possibly contributing to the knowledge needed to find biological changes at the root of addiction.”

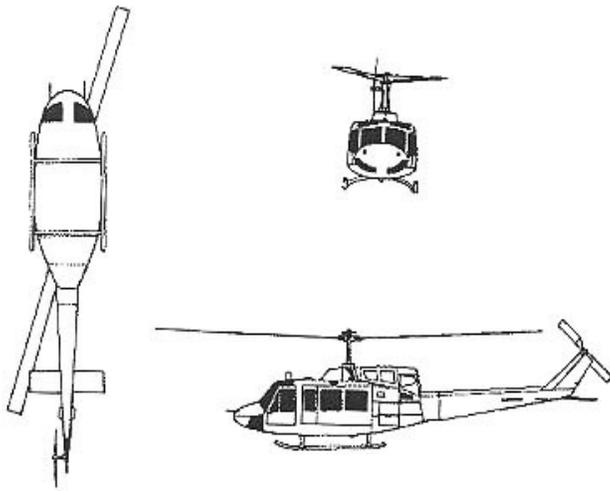
Winning second place and \$1,500 was Ethan Garrett Guinn, from Moore High School in Moore, Okla., for his project, *Video Games: The Next Generation’s Addiction*. The 17-year-old senior chose the topic based on his observation that video games are often used as babysitting tools, yet can lead to obsessive use.

The third place \$1,000 award was given to freshman Shelby Marie Raye from Manatee High School in Bradenton, Fla. Her project, *What’s In and What’s Out: High Schoolers’ Perceptions of Coolness*, identified unique parameters that affect life trajectories and may help scientists better understand peer pressure, a factor in initiation of substance abuse.

“This is the first year we have participated in the Intel competition, so we did not know what to expect,” said head NIDA judge Dr. Lucinda Miner, deputy director of the Office of Science Policy and Communications. “We were thrilled at the quantity and quality of projects that explored addiction science, which gives us great optimism about the future of this important field.”



*First-place winner Kapil Vishveshwar Ramachandran (r) poses with Dr. Lucinda Miner, deputy director, NIDA Office of Science Policy and Communications, and Dr. Ruben Baler, NIDA scientist.*



## HELICOPTERS

CONTINUED FROM PAGE 1

### **Above, l:**

*Three views of the UH-1H—also known as the “Huey”—a multipurpose military helicopter used to transport patients*

### **Above, r:**

*The UH-1H/Huey has a radar altimeter, distance-measuring equipment, instrument landing system and a rescue hoist.*

Second, as NNMC is integrated with Walter Reed Army Medical Center, more service personnel, veterans and their dependents will require “medevac” (the military term for air ambulance service) to and from Bethesda.

The numbers are increasing daily: 800 rotorcraft—that is, helicopters—transport 1,000 patients a day in the U.S.; that’s a lift-off every 90 seconds. Suburban Hospital counts 400-500 flights per year; NNMC claims 120-140 flights, with the Base Closure and Realignment Commission (BRAC) changes at Navy adding more.

Meanwhile, “the noise and safety impacts of helicopter flights are relevant not only to NIH neighbors,” says Coleman, “but also to the NIH mission. The [Bethesda] campus itself is supposed to be a natural as opposed to industrial setting and include ‘contemplative areas’ where staff can go outside and think about their biomedical research.”

That idea is embedded in the word campus (meaning “field” in Latin). The 306-acre Bethesda campus boasts a creek, lawns, woodlands and preservation areas with their own flight traffic: the 50 species of birds seen nesting or feeding hereabouts.

“There is a noise and potential safety issue here,” says Coleman, “since NIH also has patients and tall buildings.”

Moreover, he notes that as chopper traffic has increased, community members have asked him to research information on the regulatory, legal and agency framework protecting “both public and operator interests.”

Although NIH has no helipad, Coleman heard neighbors’ concerns and, assisted by Sharon Robinson, has just released a report to the Community Liaison Council titled “Regulatory Survey of Urban Helicopter Operations and Associated Emergency Medical Transport Services.”

According to the report, the most recent FAA advisory circular recommends “avoidance of flights over noise-sensitive areas”; if that’s not possible, then pilots should “make every effort to fly at least 2,000 feet above the surface.” Minimum safe altitude recommended is 1,000 feet.

Bethesda itself is deemed a “noise-sensitive area” by the Metropolitan Washington Council of Governments, given its population density and the number of hospitals.

“We live very close to Suburban at the south end of campus,” says OD employee Dr. Penny Burgoon, “and it feels like they’re landing on top of the house.”

And what of safety? Coleman notes that air ambulance pilots tend to be the best, but 1 of every 10,000 flights ends in an accident, especially when densely developed urban areas and associated obstacles are involved. This, he says, is why recommended flight paths are generally over streams, highways, parks and other open areas.

Yet the regulatory matrix is intricate, with multiple overlapping federal, state and local agencies as well as private industry. So if folks have questions or concerns, “it’s usually more effective for communities impacted by helicopter operations to keep it simple at first and start

by communicating their concerns directly to the facility operators.” That means the security manager at Suburban Hospital and the Public Affairs Office at Navy Med.

How loud is too loud? To put the numbers in perspective, sound is measured in decibels (dBA) and the scale is not linear, but logarithmic. In other words, the threshold of human hearing is 3 dBA, and every 10 dBA increase beyond that sounds 50 percent louder. Some examples:

- Montgomery County’s nighttime noise limit is 55 dBA; 65 during the day;
- A normal conversation from 3 feet away is 60 dBA;
- A helicopter from 1,000 feet away is 70-90 dBA.

According to the National Institute on Deafness and Other Communication Disorders, long-term, unprotected exposure to sounds at or above 85 decibels can damage your ears.

This doesn’t mean that you can’t cut your grass with a power mower (90 dBA) in Montgomery County.

“In reality,” says Coleman, “the enforcement is selective and discretionary. It’s all a balance and there is an element of societal benefit that goes into enforcement.”

Meanwhile, since 1981, the Fly Neighborly Program, one of the industry’s self-regulating efforts to avoid further government regulation, has been accepted by civil, military and government operators.

What makes helicopters so loud, of course, is the noise of the engines and rotors. The only flying machine designed to hover, the helicopter typically has one or two turbine engines with 1,000 to 2,000 horsepower each and serves multiple uses, including rescue and transport.

Coleman cites 14 types of helicopters that fly into and out of Bethesda. Versatile and durable, they come in small (Bell 206L, Bell 407, EC AS-350); medium (BK-117, A-109, EC-135, EC-145, Bell 430); large (S-76, AS-365, Bell 2120); and military (VH-3D, the “Marine One” ’copter used to transport the President; UH-IV, the “Huey”; and UH-60—the “Blackhawk”).

No matter the size or sound, the rotorcraft seen locally are usually moving patients, which is a mission few can complain about. 🚁



*NIDDK director Dr. Griffin Rodgers (c) welcomes new council members (from l) Dr. Nancy Andrews, James Schlicht, Dr. James Freston and Dr. David Altshuler.*

### **NIDDK Welcomes New Council Members**

Four new members were recently named to the National Diabetes and Digestive and Kidney Diseases Advisory Council.

Dr. David M. Altshuler is assistant professor of genetics and medicine at Harvard Medical School and director of medical and population genetics at the Whitehead Institute/Massachusetts Institute of Technology’s Center for Genome Research. He studies human genome sequence variation to understand the inherited basis of common human diseases, especially type 2 diabetes and its complications.

Dr. Nancy C. Andrews, dean and vice chancellor of academic affairs at Duke University School of Medicine, is the first woman to be appointed dean of Duke’s School of Medicine and the only woman to lead one of the nation’s top 10 medical schools. Her research focuses on iron absorption and its role in hereditary hemochromatosis, an inherited disease that causes excess accumulation of iron in the body.

Dr. James W. Freston is the Boehringer Ingelheim chair of clinical pharmacology and professor emeritus at the University of Connecticut School of Medicine at Farmington. His research interests include the clinical pharmacology of digestive diseases such as acid-related disorders and drug-induced liver injury.

James P. Schlicht is executive vice president and chief government affairs and advocacy officer at the American Diabetes Association, where he is responsible for implementation of the association’s public policy positions. He previously served in the General Accounting Office and the Office of Management and Budget and was a staff aide to the U.S. House ways and means committee.



## STEM CELLS

CONTINUED FROM PAGE 1

### Above:

Speakers at the stem cell meeting included (from l) Dr. Clive Svendsen, Dr. Mark Freedman, Dr. Douglas Kerr and Dr. Linda Griffith.

### Below:

Chatting at the session are (from l) Dr. George Daley, NIDCD director Dr. James Battey, NINDS director Dr. Story Landis and NIH director Dr. Elias Zerhouni.

PHOTOS: JANET STEPHENS



Institute at Harvard and the Howard Hughes Medical Institute described the undisputed success story in stem cell therapy—the use of bone marrow transplants (BMT) to treat cancers. Bone marrow is a source of blood-forming stem cells that can replace cancerous blood cells or reconstitute the blood after chemotherapy. Orkin noted that umbilical cord blood also contains blood-forming stem cells and is sometimes used as an alternative to bone marrow.

Most of the day was devoted to the exploratory use of stem cell therapy for neurological, cardiac, musculoskeletal and metabolic disorders—often with discussions about whether BMT could be adapted to treat them.

In the neurological disease session, Dr. Mark Freedman of the University of Ottawa and Ottawa Health Research Institute discussed testing BMT against multiple sclerosis, where immune cells in the blood attack the brain. Preliminary studies suggest that BMT reboots the immune system

and leads to improvement in MS patients with early aggressive disease, he said.

Two talks highlighted one of the day's themes: using stem cells to replace as opposed to using them to repair. Dr. Douglas Kerr of Johns Hopkins University is testing the ability of human ES cells to generate new neurons in animal models of spinal muscular atrophy. Meanwhile, Dr. Clive Svendsen of the University of Wisconsin is testing whether human fetal stem cells engineered to secrete growth factors can rescue neurons in animal models of Parkinson's disease and amyotrophic lateral sclerosis.

Dr. Douglas Losordo of Northwestern University reviewed several studies with a single goal—testing bone marrow stem cells in heart attack

victims. There is hope that bone marrow cells, infused into the heart, might generate or repair cardiac tissue, but study results have been inconsistent, he said. Dr. Annarosa Leri of Harvard Medical School presented evidence that there are resident stem cells in the heart that decline with age and that it might be possible to reactivate them. And Dr. Michael Laflamme of the University of Washington described efforts to use human ES cells to regenerate cardiac muscle in animal models of heart disease.

Researchers also described efforts to use stem cells derived from adult bone marrow and muscle to treat musculoskeletal disorders. “The emphasis [of this research] is going from replacement to repair,” said Dr. Darwin Prockop of Tulane University Medical School, who noted that while adult stem cells appear to have limited pluripotency, they do appear to secrete chemicals that promote cell survival.

Prockop said clinical studies suggest that mesenchymal stem cells—a type of cell in bone marrow—are beneficial in children with brittle bone disease. Dr. Paolo Bianco of Università La Sapienza in Rome said that experiments with mesenchymal stem cells have also yielded insights into how bone cancers form. Finally, Dr. Terence Partridge of Children's National Medical Center described how mesangioblasts—a type of stem cell in blood vessels—appear capable of enhancing muscle mass in mice with muscular dystrophy.

In the metabolic disorders session, Dr. Markus Grompe of Oregon Health and Science University and Dr. Kenneth Zaret of Fox Chase Cancer Center in Philadelphia described their research on cell therapy for liver disease. Both said that with a shortage of donated livers available for transplant, surgeons are increasingly looking toward stem cells as a source of healthy liver tissue—but the path from stem cell to mature liver cell is poorly understood. Dr. Linda Griffith of the Massachusetts Institute of Technology said that in order to use stem cells to rebuild the liver and other organs, scientists “need to understand the nanoscale biophysics of tissue” and how cells move within it.

In a final talk, Dr. George Daley of the Harvard

Stem Cell Institute described new technologies that offer the promise of patient-specific stem cell therapy. For example, researchers have found that they can extract cells from adult tissue and turn them into ES-like cells, called induced pluripotent stem (iPS) cells. Patient-specific iPS cells would have the advantage of gliding past the body's immune defenses, but might prove too costly for most patients. One solution, Daley said, might be to create banks of immunologically matched iPS cells similar to bone marrow banks.

NIDCD director Dr. James Battey closed the symposium by revisiting the first talk. Early research on bone marrow stem cells took place more than 50 years ago, he said. "It takes time to characterize a population of cells and bring it to the clinic." ●

### NCI Adopts 'Sherpa' Coaching Skills

NCI's Office of Workforce Development (OWD) recently offered NCI supervisors and team leaders an opportunity to develop executive coaching skills through a training program. The 2-day experience offered fundamental coaching skills and techniques that foster communication, understanding, accountability and enhanced effectiveness.

One session employed a philosophy derived from Sherpa guides—Himalayan mountain guides who support climbers ascending Mt. Everest. These guides cannot climb Mt. Everest for their clients; they climb with their clients. Sherpa coaches use questions and activities to challenge thinking and assumptions and increase self-awareness. The techniques help the client distill thoughts, obtain clarity and develop action plans.

Participants learned the difference between coaching and managing and developed listening and questioning skills with an emphasis on framing Sherpa questions.

The second day of training provided opportunities to enhance self-awareness. Using the Weakness Mountain coaching tool, participants reflected on their own weaknesses and explored alternative behaviors to mitigate them.

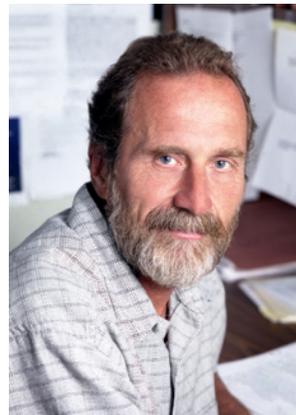
Due to demand, an overflow training session is scheduled for early September. Contact Sandra Thomas, (301) 435-8524, to register for training opportunities. NCI OWD staff are trained in the Sherpa model and are available to provide coaching services to any NCI employee GS-12 and above. To learn more about these services, or to request a coach, call the number above.

### Allen Takes New Post as NIGMS Deputy EO

*Kimberly Allen was recently appointed deputy executive officer of NIGMS.*

*In her new position, she works closely with the NIGMS executive officer to manage the institute's administrative operations including financial*

*management, information technology and management analysis. Prior to joining NIGMS in 2005 as a management analyst, Allen worked at the Office of Biotechnology Activities and NCBI as an administrative specialist, at NCI as an acting administrative officer/administrative assistant and at NIAID as a personnel assistant. Her committee service includes the recruitment reengineering initiative communications and branding workgroup, NIH ethics advisory committee, Austin Project/IC access committee, deputy ethics counselors/ethics coordinators group and management analyst working group. Allen earned her bachelor's and master's degrees from the University of Maryland, Baltimore County.*



### Cidlowski Honored by Endocrine Society

*Dr. John Cidlowski, chief of the NIEHS Laboratory of Signal Transduction and head of the molecular endocrinology group, was presented with the 2008*

*Edwin B. Astwood Award at the Endocrine Society's*

*90<sup>th</sup> annual meeting in San Francisco recently. He was one of 11 recipients of ENDO 2008 Laureate Awards, which the society describes as "the pinnacle of achievement in the field of endocrinology." As part of his award, Cidlowski was invited to present the Astwood Award Plenary Lecture. He spoke on "The Glucocorticoid Receptor: One Gene, Many Proteins—New Mechanisms for Tissue-Specific Actions of Glucocorticoids." His major research interests are glucocorticoid receptors and their actions on the inflammatory response triggered by environmental stress via steroid hormone action and the regulation of apoptosis in normal and neoplastic cells.*

### Common Spice Curries Favor in Research on Diabetes, Obesity

An Asian spice used in many curries is already known to reduce inflammation, heal wounds and relieve pain. Now scientists funded in part by NICHD want to know if turmeric can ward off obesity and type 2 diabetes. Based on blood-glucose levels and glucose and insulin tolerance tests, turmeric-treated mice were shown to be less susceptible to developing type 2 diabetes. Turmeric-fed obese mice showed significantly reduced inflammation in fat tissue and liver. Researchers believe curcumin—the anti-inflammatory, anti-oxidant ingredient in turmeric—lessens insulin resistance and prevents type 2 diabetes in these models by dampening the inflammatory response provoked by obesity. The findings were presented recently at ENDO 2008, the Endocrine Society's annual meeting.

### ACCORD Finds Reducing Blood Sugar Levels Doesn't Reduce Heart Attacks or Strokes

The strategy to get blood sugar to near-normal levels does not reduce cardiovascular events, according to results of the ACCORD trial. In fact, the strategy seems to increase death in people with diabetes at high risk, researchers reported in the June 12 *New England Journal of Medicine*. The ACCORD (Action to Control Cardiovascular Risk in Diabetes) trial was conducted at 77 sites nationwide and in Canada. It randomly assigned 10,251 participants to standard or intensive blood sugar treatment goals. Therapy in both groups included patient education, counseling and treatment with FDA-approved diabetes medications. ACCORD evaluated the effects of intensively targeting blood sugar control among adults with established diabetes, high blood sugar levels and pre-existing heart disease or at least two cardiovascular disease risk factors in addition to diabetes. The intensive strategy group had a 22 percent higher risk of death. The increased risk began 1 to 2 years after the strategy started to aggressively lower blood sugar levels. Researchers caution that the results might not apply to patients who are at lower risk of cardiovascular disease.

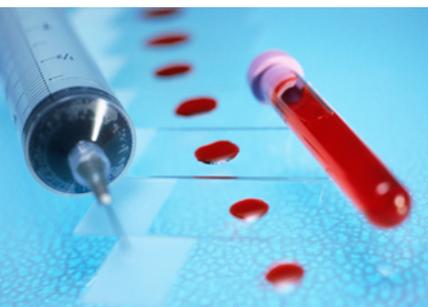
### Novel Diarrhea Treatment Could Reduce Disorder in Children, Travelers

A novel compound that might lead to an inexpensive, easy-to-take treatment for acute diarrhea

has been discovered by NIGMS-funded scientists at the University of Texas Health Science Center. The development could reduce diarrhea-related deaths among children in developing countries. Results of pre-clinical tests are reported in the June 16 online edition of *Proceedings of the National Academy of Sciences*. The compound—a pyridopyrimidine derivative—targets acute secretory diarrhea caused by *E. coli* and other enterotoxigenic strains of bacteria, which produce toxins that stimulate the linings of the intestines, causing them to secrete excessive fluid, thereby producing diarrhea. During pre-clinical tests, the compound was associated with a significant reduction in intestinal fluid secretion in an animal model of bacterial diarrhea. It was also linked to reduced fluid build-up during lab tests on human colon cells. It caused significant decrease in fluid secretion without apparent toxicity. While the research looks promising as a preventive or therapy in Third World diarrheal disease and travelers' diarrhea, scientists say much work remains to be done to move into clinical trials.

### Tune-Deaf People May Hear a Sour Note Unconsciously

People with tune deafness can't tell when a musician accidentally strikes the wrong note in a song, but their brains can. Tune-deaf people are unable to perceive pitch, reproduce melodies or identify deviations in a melody. They may, however, be able to detect a wrong note unconsciously, NIDCD researchers have found in a study published in the June 11 issue of the online journal *PLoS ONE*. Tune deafness is an auditory processing disorder in which a person with normal hearing has trouble distinguishing notes in a melody. It is a commonly occurring phenomenon that is largely inherited. Studying this disorder could enable scientists to use genetic research tools to better understand the differences between conscious and unconscious thought. Neuroscientists have long been baffled by what separates consciousness from unconsciousness. Other sensory disorders have been identified in which the brain perceives a stimulus outside of conscious awareness. However, because these disorders are typically caused by brain damage, data are inconsistent from one patient to the next. "The prevalence of tune deafness is surprisingly high—perhaps as much as 2 percent of the population is tune deaf—and it exists in an otherwise normal, uninjured brain," said Dr. James Battey, NIDCD director. "These factors, combined with the fact that tune deafness is largely genetic in origin, now raise the possibility of using tune deafness as a new way to study consciousness." An online version of the Distorted Tunes Test scientists use can be found at [www.nidcd.nih.gov/tunetest/](http://www.nidcd.nih.gov/tunetest/).—compiled by Carla Garnett



The ACCORD study evaluated the effects of intensively targeting blood sugar control. The strategy does not reduce cardiovascular events, according to results.



The phone numbers for more information about the studies below are 1-866-444-2214 (TTY 1-866-411-1010) unless otherwise noted.

### **Dry Mouth**

Do you have dry mouth after treatment for head and neck cancer? Participate in an NIH clinical research study.

### **Asthma Study**

NIH is seeking adults 18-75 years old with asthma to participate in a research study. Compensation is provided.

### **Are You a Working Breast Cancer Survivor?**

Women breast cancer survivors, 1 to 10 years after primary cancer treatment, whose breast cancer has not spread and women without cancer history are needed for online study on cognitive function and work. Must be currently working full-time, ages 18 through 65, and without a history of adult ADHD (prior to cancer), dementia, brain injury, epilepsy, drug or alcohol abuse. You will need Internet access with connection speed faster than dial-up. Study includes completing questionnaires and a short online test of memory. The study will take about 60-75 minutes to complete. To see if you are eligible, go to <http://cim.usuhs.mil/cancerstudy>. For more information, call Lisseth Calvio at (301) 295-9660 or email [cogworkstudy@gmail.com](mailto:cogworkstudy@gmail.com).

### **Neck Pain Study Needs Volunteers**

The Clinical Center's rehabilitation medicine department is seeking individuals with neck pain and healthy volunteers between the ages of 21-65 to participate in a natural history study of neck pain (02-CC-0245). Participation involves 4 monthly visits (about 1 hour each) for a comprehensive cervical musculoskeletal examination. No compensation is provided. Contact [neckpainstudy@gmail.com](mailto:neckpainstudy@gmail.com) or (301) 451-7514.

### **Heart Disease Risk Factors Study for African Americans**

Healthy black African volunteers are needed for a study investigating the relationship of obesity to heart disease risk factors. Volunteers must be born in Africa, non-diabetic and between ages 18-49. There will be 3 outpatient visits to NIH. Compensation is provided. Call (301) 402-7119 for information. Refer to protocol 99-DK-0002.

### **Study of Pre-Menopausal African American, Caucasian Women**

Healthy African American and Caucasian women volunteers are needed for a study investigating the effect of the American diet on vascular disease risk. The study will look at the effect of fat in the blood before and after a meal. Volunteers must be non-diabetic, pre-menopausal women between the ages of 18-49 years. The study requires 3 outpatient visits followed by a week of daily visits to NIH for breakfast, weight measurement and meal pick-up. Compensation is provided. For information call (301) 402-7119 and refer to protocol 07-DK-0163.

## **Online Privacy Awareness Training To Be Mandatory**

Recent breaches of government data have prompted an increase in federal privacy training requirements. The NIH Office of the Senior Official for Privacy has begun implementing HHS guidance to meet new government-wide requirements for protecting personally identifiable information, sensitive and Privacy Act-covered data.

A mandatory first step will be completion of NIH privacy awareness training by all staff and contractors. Institutes and centers have opted to launch training in either a phased approach or immediately. Workers will be contacted directly to complete training by a specified deadline. All new employees and contractors are required to complete training within 60 days of employment and annually thereafter.

Completion of the course—available at <http://irtsectraining.nih.gov>—should take about 30-60 minutes. The course contains useful information and is easy to navigate. When you've completed the course, you'll have a better understanding of the NIH privacy program, your responsibilities to protect the privacy of others and where to get help.

"We all must make a significant effort to sustain the public's trust in our ability to protect them as they give their time and participation for the sake of our research," says Karen Plá, NIH senior official for privacy. "By learning about what we can do to protect privacy, we will minimize the risk of another costly breach and continue to pursue our mission of helping to save lives, while demonstrating respect to those who assist us in our groundbreaking discoveries here at the NIH."

If you have questions about the training, contact your IC privacy coordinator ([http://oma.od.nih.gov/about/contact/browse.asp?fa\\_id=3](http://oma.od.nih.gov/about/contact/browse.asp?fa_id=3)). In addition, read *The NIH Eye on Privacy* sent out by the Division of Management Support, NIH Office of Management Assessment. Questions about privacy impact assessments or general information can be directed to your privacy coordinator or to Plá via email ([privacy@mail.nih.gov](mailto:privacy@mail.nih.gov)) or by phone (301) 451-3426. To learn more about the Office of the Senior Official for Privacy, visit <http://oma.od.nih.gov/ms/privacy/>.

## Game-Themed Barbecue Supports Camp Fantastic

PHOTOS: RICH MCMANUS

David Leung (above, third from l) calls out bingo letters and numbers at the Camp Fantastic BBQ on June 17. In honor of the upcoming Summer Olympics, the annual barbecue featured a series of games including Operation, Connect Four and bean-bag toss—all to raise money for Camp Fantastic, a summer camp for kids with cancer. The event also offered live music, raffles, vendors and giveaways. Prizes included a weekend trip to Gettysburg, Wizards tickets and Kings Dominion tickets. At right, staff from the Hard Times Café serves food to a crowd that gathered on a beautiful spring day. Below, there was plenty of good cheer evident in the picnickers, who have supported Camp Fantastic for decades.

